

IN THE CLAIMS

1. (Currently Amended) In a data communication device including multiple communication ports, a method of configuring at least one of the communication ports, the method comprising:
 - monitoring a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;
 - based on the monitored communications, detecting an attribute of the remote device;
 - in response to detecting the attribute of the remote device, retrieving one of multiple configuration profiles corresponding to the attribute of the remote device; and
 - configuring the given communication port of the data communication device with the retrieved one of multiple configuration profiles to support future communications with the remote device.
2. (Currently Amended) A The method as in claim 1, wherein monitoring a the communications protocol associated with a the remote device includes:
 - detecting that the remote device uses a particular protocol in which to communicate through the given communication port with a network resource; and
 - wherein configuring the given communication port includes
configuring the given communication port based on detecting the
particular protocol used by the remote device to communicate through the
given communication port, monitoring for at least one of multiple
communications protocols potentially associated with the remote device.

3. (Currently Amended) A ~~The~~ method as in claim 1, wherein monitoring communications with a ~~the~~ remote device on a ~~the~~ given communication port includes:
monitoring initial communications with the remote device based on the communications protocol after coupling the remote device to the data communication device via the given communication port.
4. (Currently Amended) A ~~The~~ method as in claim 1 further comprising:
in the event that a configuration profile does not exist for the detected attribute of the remote device, configuring a corresponding communication port of the communication device with a default configuration profile.
5. (Currently Amended) A ~~The~~ method as in claim 1 further comprising:
polling a network node for updated configuration profiles; and
in response to polling, storing ~~the~~ at least one ~~of the~~ updated configuration profile ~~profiles~~ from the network node to local memory of the data communication device.
6. (Currently Amended) A ~~The~~ method as in claim 1 further comprising:
receiving a message at the data communication device from a network node indicating availability of updated configuration profiles; and
receiving the updated configuration profiles from the network node to local memory of the data communication device.
7. (Currently Amended) A ~~The~~ method as in claim 1, wherein detecting an ~~the~~ attribute of the remote device includes:
determining a network address associated with the remote device;
identifying a particular type associated with the remote device; and

wherein retrieving one of multiple configuration profiles includes retrieving a configuration profile depending on the identified particular type of remote device.

8. (Currently Amended) A The method as in claim 7, wherein detecting ~~an~~ the attribute of the remote device indicating its type includes detecting an attribute based on at least one of : 802.1x user authentication, CDP (Cisco Discovery Protocol), MAC address/mask assignment, IP address assignment, DHCP (Dynamic Host Configuration Protocol) response, ACL (Access Control Lists), and hardware and software associated with the remote device.
9. (Currently Amended) A The method as in claim 1, wherein detecting ~~an~~ the attribute of the remote device includes:
detecting a change in a network address associated with the remote device.
10. (Currently Amended) A The method as in claim 1, wherein retrieving one of multiple configuration profiles includes retrieving one of multiple configuration profiles that includes information indicating how to set at least one parameter of the given communication port to support future communications with the remote device
11. (Currently Amended) A The method as in claim 10, wherein configuring the given communication port of the data communication device with the retrieved configuration profile includes setting the given port of the data communication device based on at least one of the following parameter types: protocol type, LACP (Link Aggregation Control Protocol, security policies, security parameters, access control lists, UDLD (Uni- Directional

Link Detection), Etherchannel, Spanning Tree, VLANs (Virtual Local Area Networks), routing protocols, and QoS (Quality of Service).

12. (Currently Amended) A the method as in claim 1 further comprising:
storing the multiple configuration profiles at a network node accessible to the data communications device over a network link; and
wherein retrieving a the configuration profile includes obtaining a configuration profile from the network node accessible to the data communication device.
13. (Currently Amended) A the method as in claim 1, wherein monitoring communications associated with ~~a~~ the remote device includes:
applying multiple attribute discovery mechanisms to identify a corresponding configuration profile to configure the given communication port associated with the remote device, the multiple attribute discovery mechanisms including: i) a first attribute discovery mechanism for discovering an authentication attribute associated with the remote device, and ii) a second attribute discovery mechanism for discovering a change in a setting associated with the remote device.
14. (Currently Amended) A data communication device comprising:
at least two communication ports; and
at least one processor device that:
monitors a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;
detects an attribute of the remote device based on the monitored communications;

retrieves one of multiple configuration profiles corresponding to the attribute of the remote device in response to detecting the attribute of the remote device; and
configures the given communication port of the data communication device with the retrieved one of multiple configuration profiles profile to support future communications.

15. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor monitors for at least one of multiple communications protocols potentially associated with the remote device.
16. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor monitors initial communications with the remote device based on the communications protocol after the remote device has been coupled to the data communication device through the given communication port.
17. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor configures a corresponding communication port of the communication device with a default configuration profile in the event that a specific configuration profile does not exist for the detected attribute of the remote device.
18. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor additionally:
polls a network node for updated configuration profiles; and
in response to polling, obtains the at least one of the updated configuration profiles profile from the network node to local memory of the data communication device.

19. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor additionally:
 - receives a message at the data communication device from a network node indicating availability of updated configuration profiles; and
 - wherein the data communication device further comprises:
 - a memory device to store the updated configuration profiles retrieved from the network node.
20. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor additionally:
 - determines a network address associated with the remote device;
 - identifies a particular type associated with the remote device; and
 - retrieves a configuration profile depending on the identified particular type of remote device.
21. (Currently Amended) A The data communication device as in claim 20, wherein the attribute of the remote device indicating its type is detected based on at least one of : 802.1x user authentication, CDP (Cisco Discovery Protocol), MAC address/mask assignment, IP address assignment, DHCP (Dynamic Host Control Protocol) response, ACL (Access Control Lists), and hardware and software associated with the remote device.
22. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor additionally:
 - detects a change in a network address associated with the remote device.
23. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor configures the given communication

port of the data communication device with the retrieved configuration profile by setting the given port of the data communication device based on at least one of the following parameter types: protocol type, LACP (Link Aggregation Control Protocol, security policies, security parameters, access control lists, UDLD (Uni- Directional Link Detection), Etherchannel, Spanning Tree, VLANs (Virtual Local Area Networks), routing protocols, and QoS (Quality of Service).

24. (Currently Amended) A The data communication device as in claim 14, wherein the multiple configuration profiles are stored at a network node accessible to the data communications device over a network link.

25. (Currently Amended) A The data communication device as in claim 14, wherein the at least one processor additionally:
applies multiple attribute discovery mechanisms to identify a corresponding configuration profile to configure the communication port associated with the remote device.

26. (Currently Amended) A data communication device comprising:
at least two communication ports;
means for monitoring a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;
means for detecting an attribute of the remote device based on the monitored communications;
means for retrieving one of multiple configuration profiles corresponding to the attribute of the remote device in response to detecting the attribute of the remote device; and

means for configuring the given communication port of the data communication device with the retrieved one of multiple configuration profiles profile to support future communications.

27. (Currently Amended) A computer program product including a computer-readable medium having instructions stored thereon for processing data information, such that the instructions, when carried out by a processing device, enable the processing device to perform the steps of:

monitoring a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;

based on the monitored communications, detecting an attribute of the remote device;

in response to detecting the attribute of the remote device, retrieving one of multiple configuration profiles corresponding to the attribute of the remote device; and

configuring the given communication port of the data communication device with the retrieved one of multiple configuration profiles profile to support future communications.

28. (New) The method as in claim 1, wherein the data communication device is a switch device having the multiple communication ports on which to communicate with multiple different remote devices; and

wherein configuring the given communication port includes configuring the given port of the switch device based on learned attributes of the remote device, configuring of the given communication port enabling communications from a source through the given communication port over a network connection to the remote device.

29. (New) The method as in claim 1, wherein the data communication device is a switch device 28 in a network, the method further comprising:
 - after configuring the given communication port, notifying the remote device that the given communication port of the data communication device has been configured via use of the retrieved one of multiple configuration profiles.
30. (New) The method as in claim 29 further comprising:
 - in response to configuring the given communication port with the retrieved one of multiple configuration profiles, notifying the remote device how to set parameters associated with a port of the remote device.
31. (New) The method of claim 7, wherein identifying the particular type associated with the remote device includes detecting that the network address assigned to the remote device falls within a range of network addresses, each of multiple similar types of remote devices having an assigned address in the range requiring similar types of communication port settings; and
 - wherein identifying the particular type associated with the remote device comprises determining the particular type based on knowing a type associated with the multiple remote devices that have a corresponding network address falling within the range.
32. (New) A method as in claim 1, wherein detecting the attribute of the remote device comprises detecting a first attribute of the remote device, the method further comprising:
 - detecting a second attribute associated with the remote device;
 - identifying a higher associated priority of the first attribute and the second attribute;

utilizing one of the first attribute and second attribute having the identified higher associated priority in which to identify a corresponding configuration profile for configuring the given communication port.

33. (New) A method as in claim 1, wherein the data communication device is a switch device and wherein configuring the given communication port comprises:

identifying a quality of service as specified by the retrieved one of multiple configuration profiles; and

setting the given communication port to support the quality of service as specified by the as specified by the retrieved one of multiple configuration profiles.